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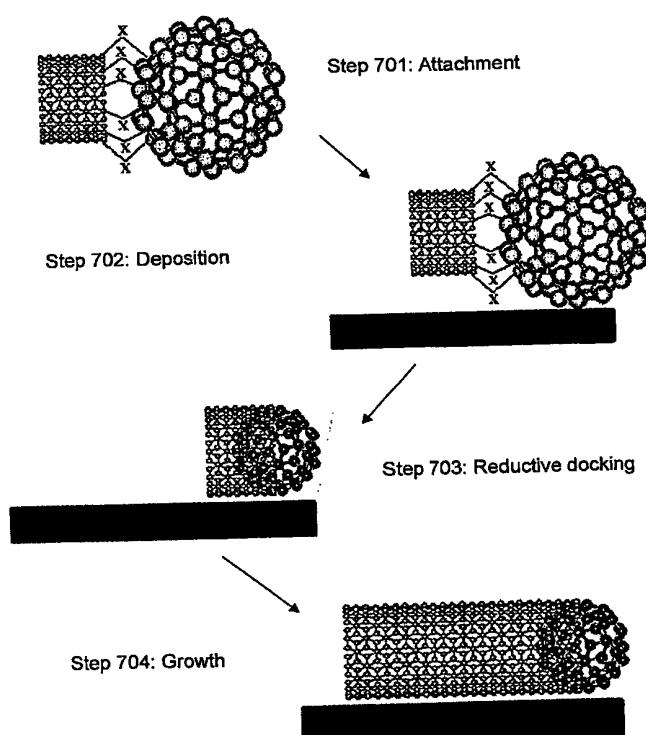
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(54) Title: AMPLIFICATION OF CARBON NANOTUBES VIA SEEDED-GROWTH METHODS



(57) Abstract: The present invention is directed towards methods (processes) of providing large quantities of carbon nanotubes (CNTs) of defined diameter and chirality (i.e., precise populations). In such processes, CNT seeds of a pre-selected diameter and chirality are grown to many (e.g., hundreds) times their original length. This is optionally followed by cycling some of the newly grown material back as seed material for regrowth. Thus, the present invention provides for the large-scale production of precise populations of CNTs, the precise composition of such populations capable of being optimized for a particular application (e.g., hydrogen storage). The present invention is also directed to complexes of CNTs and transition metal catalyst precursors, such complexes typically being formed en route to forming CNT seeds.

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